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REMARKS

The Invention.

The present invention provides a novel β -glucosidase nucleic acid sequence, designated *bgl4*, and the corresponding BGL4 amino acid sequence. The presently claimed invention also provides expression vectors and host cells comprising a nucleic acid sequence encoding BGL4, recombinant BGL4 proteins and methods for producing the same.

Status of the Application.

Claims 1-17, 19-20, 22-24 and 26 are pending in the application. Claim 1 has been cancelled herein. Claims 2, 6-8, 22, 23 and 28 have been amended herein. Claims 6, 7 and 28 were amended to correct minor errors in type font. Claims 2, 8 and 23 were amended to clarify what Applicants believe is the metes and bounds of the invention. Support for these amendments may be found throughout the specification as filed. No new matter is introduced by these amendments and their entry is respectfully requested.

Claim Objections.

Claim 2 is objected to as allegedly reciting duplicate limitations. Specifically, the Examiner asserts that part (c) and part (e) are duplicative as are part (d) and part (f). Applicants respectfully disagree.

Parts (c) and (d) refer to Figure 2, while parts (e) and (f) refer to SEQ ID NO:2. Figure 2 depicts the enzyme with its secretion signal while SEQ ID NO:2 recites the mature sequence (without the secretion signal). Thus, two different molecules are being referred to in the different parts. Withdrawal of this objection is respectfully requested.

Various claims were objected to because biological names were not in italics. Applicants have corrected the biological names to be recited in italics rendering this objection moot. Withdrawal of the objection is respectfully requested.

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35 U.S.C. §112, first paragraph.

Claims 1-17, 19-20, 22 and 26

Claims 1-17, 19-20, 22 and 26 stand rejected under 35 USC §112, first paragraph, as failing to be allegedly being non-enabled. Applicant respectfully traverses.

The Examiner argues that the specification does not provide enablement for "a polynucleotide isolated from any all [sic] sources", or a polynucleotide that has 85% or more identity to the polynucleotide encoding the polypeptide with SEQ ID NO:2. It is settled law that the Patent Office, in asserting an enabling disclosure is not commensurate in scope with the protection sought, must support such assertions with evidence or reasoning substantiating the doubts so expressed. In re Dinh-Huuyen, 181 U.S.P.Q. 46 (CCPA 1974). The Patent Office requirement is further described in In re Bowen, 181 U.S.P.Q. 48 (CCPA 1974):

"As a matter of Patent Office practice, then, a specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented *must* be taken as in compliance with the enabling requirement of the first paragraph of §112, *unless* there is reason to doubt the objective truth of the statements contained therein which must be relied upon for enabling support. . . .

Here, the only reason given appellant why his specification does not enable one skilled in the art to use his invention as broadly as it is claimed is the statement of the board that "polymerizable materials" include "not only . . . all of the very many organic polymers . . . but also inorganic polymers." But even this statement only identifies a subgenus of "polymerizable materials" without giving a reason for the implication inherent therein that inorganic polymers would not work in appellant's process. . . .

Accordingly, there appears to be no basis for the non-enablement rejection on the theory that claims read on undisclosed polymers. While the claims literally comprehend numerous polymers in addition to the one specifically described in appellant's specification, nylon 66, no persuasive reason has been given by the Patent Office why the specification does not realistically enable one skilled in the art to practice the invention as broadly as it is claims."

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In the present case, the Office Action provides no extrinsic evidence regarding non-enablement. Instead, the Office Action relies upon the opinion of the Examiner that the breadth of the claim is unsupportable because there aren't enough examples. While the Office Action does review the results provided in the Examples and suggests its position that these results are insufficient, the Office Action is entirely devoid of technical reasoning and/or reference to extrinsic evidence which supports the position therein that one of skill in the art would be unable to make and use the invention as claimed. Accordingly, Applicants respectfully submit that the unsupported opinion of the Examiner that a specific claimed embodiment is "too broad" and would require undue experimentation is not the standard of non-enablement.

Claims 1, 6-7, 19-20, 22 and 26

Claims 1, 6-7, 19-20, 22 and 26 stand rejected under 35 USC §112, first paragraph as allegedly containing subject which was not described in the specification in such a way as to convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner asserts that the "specification does not contain any disclosure of the structure of all DNA sequences that are encompassed by them." See page 8 of the Office Action. Applicants respectfully traverse.

The inquiry into whether the description requirement is met must be determined on a case-by-case basis and is a question of fact. *In re Wertheim*, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). A description as filed is presumed to be adequate, unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption. See, e.g., *In re Marzocchi*, 439 F.2d 220, 224, 169 USPQ 367, 370 (CCPA 1971). The examiner, therefore, must have a reasonable basis to challenge the adequacy of the written description. The examiner has the initial burden of presenting by a preponderance of evidence why a person skilled in the art would not recognize in an applicant's disclosure a description of the invention defined by the claims. *Wertheim*, 541 F.2d at 263, 191 USPQ at 97.

Applicants note that it is not necessary under §112 that every claimed embodiment be specifically exemplified. Applicants respectfully submit that a skilled

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artisan would be able to glean from the specification the metes and bounds of the invention. Applicants have provided methods for determining the enzymatic activity of the protein, as required by the present invention. See page 11, lines 6-9, of the specification. Furthermore, they, i.e., the skilled artisan, have been provided with examples of how to align the sequences and determine corresponding residues. See page 37 *et seq.* of the specification. Protein sequencing is now routine in the art and does not require undue experimentation. Thus, a skilled artisan would be able to discern whether or not their protein has the required activity and sequence as described in the present specification.

For these reasons, Applicant believes the rejection is in error. Withdrawal of the rejection is respectfully requested.

35 U.S.C. §112, second paragraph.

Claims 1 and 6-7

Claims 1 and 6-7 stand rejected under 35 USC §112, second paragraph as being indefinite as failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner asserts that the phrase "derived from" is unclear. Applicants respectfully traverse.

The word "derive" means: **1 a** : to take, receive, or obtain especially from a specified source **b** : to obtain (a chemical substance) actually or theoretically from a parent substance. Applicant has not used this word in a fashion that is antithetical to its common meaning. However, to further prosecution, Applicants have cancelled Claim 1 without prejudice herein and have amended Claim 6 to depend from amended Claim 2. Claim 7, although it has not been amended, depends from Claim 6 which has been amended. Applicants note that Claim 2 does not contain the phrase "derived from."

Withdrawal of the rejection is respectfully requested.

Claims 8-9 and 11

Claims 8-9 and 11 stand rejected under 35 USC §112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. Specifically, the Examiner asserts that the phrases "including a polynucleotide" and "including the expression construct" are unclear. Applicants have amended the claims to recite "comprising" rendering this rejection moot. Withdrawal of the rejection is respectfully requested.

Claims 8 and claims 9 and 11 dependent therefrom

Claim 8 and claims 9 and 11 dependent therefrom stand rejected under 35 USC §112, second paragraph as failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner has kindly pointed out that Applicants were comparing a nucleotide sequence with an amino acid sequence. Applicants have amended Claim 8 to correct this error. Withdrawal of the rejection is respectfully requested.

Claim 23 and claim 24 dependent therefrom

Claim 23 and claim 24 dependent therefrom stand rejected under 35 USC §112, second paragraph as failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner asserts that the term "decreases" renders the claim indefinite.

Applicants have amended claim 23 rendering this rejection moot. Withdrawal is respectfully requested.

35 U.S.C. §102(b).

Claims 1, 6-7, 19-20 and 26 stand rejected under 35 USC §102(b) as being anticipated by Takashima *et al.* (J. Biochem. (1999) 125:728-736). Applicants respectfully traverse.

Applicant has cancelled Claim 1 without prejudice herein. Claim 6 has been amended to depend from claim 2. Claim 7, although it has not been amended, depends

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from Claim 6 which has been amended. Claims 19, 20 and 26 either depend from claim 2 and/or recite specifically that the endoglucanase is an BGL IV.

Withdrawal of the rejection is respectfully requested.


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CONCLUSION

In light of the above amendments, as well as the remarks, the Applicants believe the pending claims are in condition for allowance and issuance of a formal Notice of Allowance at an early date is respectfully requested. If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (650) 846-7615.

Respectfully submitted,
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